

WEST

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Oct 22, 1986

DERWENT-ACC-NO: 1986-321473

DERWENT-WEEK: 198649

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TITLE: 3,7,11,15-Tetra:methyl- 1,2,3-tri:hydroxy:hexadecane prepn. - by reacting isophytol with tert-butyl hydroperoxide in presence of metal catalyst then opening epoxy cpd. ring before distn. of tri:ol

PATENT-ASSIGNEE:

ASSIGNEE

KURARAY CO LTD

CODE

KURS

PRIORITY-DATA: 1985JP-0077927 (April 11, 1985)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 61236737 A	October 22, 1986		005	
JP 92060455 B	September 28, 1992		005	C07C031/22

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP61236737A	April 11, 1985	1985JP-0077927	
JP92060455B	April 11, 1985	1985JP-0077927	
JP92060455B		JP61236737	Based on

INT-CL (IPC): B01J 23/22; B01J 23/28; B01J 27/24; B01J 31/02; B01J 31/20; B01J 31/22; C07B 61/00; C07C 29/10; C07C 31/22 ; C07D 303/14

.BSTRACED-PUB-NO: JP61236737A

BASIC-ABSTRACT:

3,7,11,15-Tetramethyl- 1,2,3-trihydroxyhexadecane (phytanetriol) is prepd. by reacting isophytol with tert.-butyl hydroperoxide (TBHP) in presence of vanadium or molybdenum deriv. metal catalyst to form epoxy cpd., opening ring of epoxy cpd. in presence of acidic catalyst, and performing mol. distn. of formed triol.

Epoxidation is performed using 0.5-5, pref. 1.0-1.5 moles of TBHP to 1 mole of isophytol. Various metal catalysts of vanadium or molybdenum derivs. are used. Pref. examples are those contg. chains of following formulae, -M=O, -M:O=, -O-M=O, -O-M:O=, where M is V or Mo which may further combine with other atom by one or more ionic bond(s) or covalent bond(s). Vanadium pentoxide, ammonium metavanadate, tert.-butyl (or cyclohexyl or neopentyl)-orthovanadate, vanadyl acetylacetonate, hexacarbonylmolybdenum, and tricarbonyltri acetonitrilemolybdenum are esp. pref. These catalysts are used in amt. of 0.001-10wt.%, pref. 0.01-1.0wt.% of isophytol. Reaction temp. is usually 50-150 deg.C, pref. 80-110 deg.C. Acidic catalysts, used in ring-opening reaction of epoxy cpd. are e.g., sulphuric acid, hydrochloric acid, phosphoric acid and perchloric acid, which are used in amt. of 1-100wt.%, pref. 5-20wt.% at near room temp. pref. in presence of solvent e.g., tetrahydrofuran or isopropyl alcohol.

USE/ADVANTAGE - Colourless clear phytanetriol having no unpleasant odour is

CHOSEN-DRAWING: Dwg.0/0

DERWENT-CLASS: D21 E17

CHEMICAL-CODES:

Fragmentation Code

Chemical Indexing M3 *02*

Fragmentation Code

Chemical Indexing M3 *03*

Fragmentation Code

Chemical Indexing M3 *04*

Fragmentation Code

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0389S; 1692S ; 1704S ; 1711S ; 1714S ; 1926S

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1986-138980